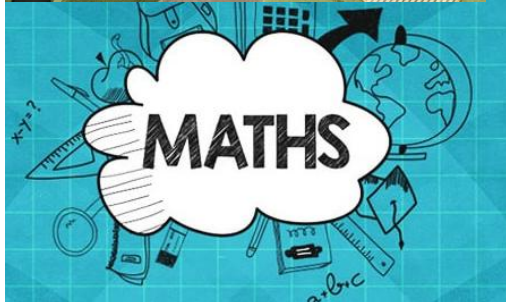
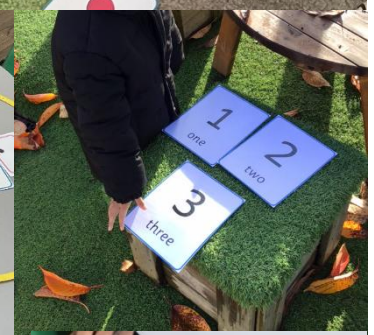
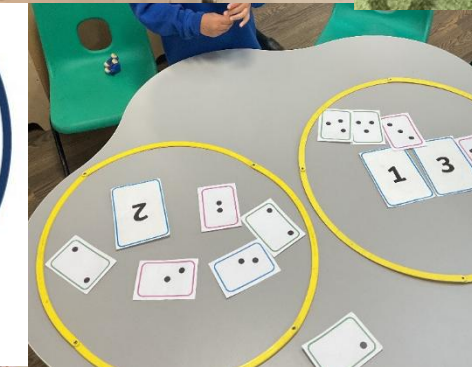
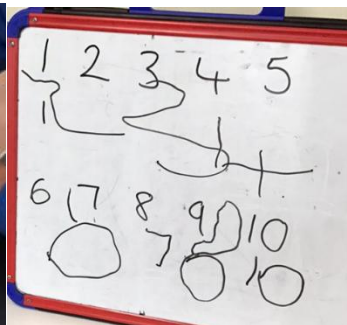
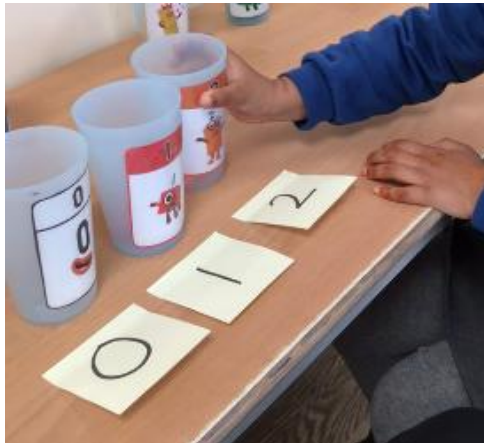


EYFS Maths Curriculum at Brownlow Fold



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Purpose of Study

The Early Years Foundation Stage framework focuses on the holistic development of children. For mathematics, the purpose is to develop foundational skills and positive attitudes toward numbers, problem-solving, and reasoning. Our teaching of maths is based on the White Rose curriculum and supplemented through the Mastering Number programme (in Reception). Maths is taught through daily, adult-led focused tasks and enhanced provision areas. Children are given regular opportunities for guided practice and to use and apply their mathematical knowledge through the provision areas. Our aim to ensure that maths is accessible to all pupils and they leave reception with a solid understanding of the Mathematics Early Learning Goals (ELGs.)

Aims

White Rose Maths follows the Early Years Foundation Stage framework for **Mathematics**, ensuring that all pupils:

Develop Early Number Sense:

Recognise numbers, count reliably, and understand quantity and order.

Begin to make connections between numbers and real-life contexts (e.g., counting toys or snacks).

Introduce Mathematical Language:

Use words related to size, shape, position, quantity, and comparison (e.g., “bigger,” “next to,” “more than”).

Communicate mathematical thinking effectively.

Encourage Problem Solving and Reasoning:

Explore patterns, sequences, and simple relationships.

Begin to make predictions and explain reasoning in simple terms.

Foster Positive Attitudes Toward Maths:

Develop curiosity, confidence, and enjoyment in exploring numbers, shapes, and patterns.

Encourage persistence and resilience in tackling challenges.

Lay Foundations for Future Learning:

Prepare children for Key Stage 1 maths by establishing understanding in counting, addition/subtraction concepts, measurement, and spatial awareness.

Curriculum Design, Methodology, Pedagogy and Teaching Approaches

The White Rose Maths curriculum is built on the principle that **secure foundational knowledge** underpins all future learning. It is carefully **sequenced into small steps** so that each new concept builds securely on prior knowledge. This structured progression **reduces cognitive overload, prevents gaps**, and ensures pupils **master the basics** before moving on. The curriculum follows a **spiral structure**, with planned opportunities to **revisit, embed and deepen learning** over time.

A strong emphasis is placed on **number**. Schemes of learning dedicate significant time to **number and place value** in the early stages, ensuring pupils gain **confidence and competence** before applying skills across the wider curriculum. The design prioritises **depth before breadth**, allowing teachers to secure deep understanding before moving to new content.

EYFS Principles of Direct Instruction

<u>Review:</u> Each lesson contains a short review of previous learning to strengthen connections and recall. 	<u>Modelling & Explanations:</u> Models and worked examples are provided to demonstrate learning in action (I DO) 	<u>Guided Practice:</u> Practice is guided by the teacher as pupils begin to practice new learning. Teachers offer support and prompts (WE DO) 	<u>Checking for Understanding:</u> The teachers continuously check for understanding by asking questions and giving feedback.  Show Me	<u>Independent Practice:</u> The teacher monitors independent practice, ensuring learning become automatic (YOU DO) 
<u>Small Steps:</u> New material is presented in small steps with opportunities to practise, reducing cognitive overload. 	<u>Questioning:</u> Children are asked lots of questions and responses checked for pupil understanding. 	<u>Scaffolding:</u> The teacher provides temporary support and scaffolds for difficult tasks which is gradually removed. 	<u>High Success Rate:</u> Aim for a high success rate during instruction to build confidence and to promote motivation. 	<u>Review:</u> The teacher facilitates daily, weekly and monthly retrieval practice to strengthen knowledge and promote automatic recall. 

Strategic Focus:

At Brownlow Fold, the strategic goal across EYFS is achievement for all. The strategic goal for the Early Years Foundation Stage is to give every child the best possible start in life by ensuring they are healthy, safe, and ready for school. This is achieved by improving the quality, and accessibility of the early years education and care we provide, and ensuring all children, especially those from disadvantaged backgrounds, have equal opportunities to succeed. Key objectives include promoting good physical and emotional development, making sure children have the necessary skills for reception and key stage one.

Addressing the Needs of the Bottom 20% in Maths

Supporting the bottom 20% of learners in EYFS in mathematics requires a combination of targeted teaching, practical strategies, and careful observation. At this stage, children are developing foundational numeracy skills, so the focus should be on building confidence, number sense, and early problem-solving skills. Here's a structured approach:

Key Areas to Focus On

For the bottom 20%, concentrate on these core numeracy areas:

- **Number Recognition:** Recognising numbers 1–10 (and beyond as ready).
- **Counting Skills:** Counting objects accurately, one-to-one correspondence, and understanding quantity.
- **Subitising:** Recognising small quantities without counting (dice patterns, finger patterns).
- **Comparison:** Understanding concepts like more, less, and equal.
- **Simple Addition and Subtraction:** Using physical objects, fingers, and visual aids.
- **Shape and Space Awareness:** Recognising shapes, patterns, and positional language.
- **Math Talk:** Encouraging children to describe what they see and do.

Concrete-Visual-Abstract Approach:

- **Concrete:** Use real objects (blocks, counters, toys).
- **Visual:** Move to pictures, diagrams, and drawings.
- **Abstract:** Introduce numerals and symbols.

Adaptive teaching In EYFS

Cognition and Learning

Visuals on lanyards are used to support play.
Using now and next boards.
Visual timetables referred to throughout the day.
Revisiting, reviewing and retrieving knowledge and skills happens regularly in EYFS.
Positive praise for the smallest achievements.
Promoting a growth mind-set.
We use a range of teaching and learning styles.
We have levelled provision which is inclusive and accessible for all.
Following the children's interests to gain their full potential when learning new skills.
Creating a nurturing environment where the children feel safe and happy.
All staff continuously developing their own awareness and understanding of SEND through CPD.
Motivate and challenge learners – so they can independently excel and achieve.
Building relationships with families and sharing good practise with families to support SEND at home.
Focus on children's wellbeing.
The voice of the child is present in assessments.
Staff complete detailed observations to gain a full understanding of the children.

Communication and Interaction

Gestures, visuals and objects are used to support children with communication skills.
Programmes such as Wellcomm, ELKLAN, Nursery/Reception narrative and Language through listening are all programmes which are used throughout EYFS to support children with SEND.
Visuals on lanyards are used to support play.
Vocabulary displayed in the learning environment to support staff with supporting children's language development (specific to each child).
Positive praise for the smallest achievements.
High quality interactions between adults and children.

Social, Emotional and Mental Health

Using now and next boards.
Visual timetables referred to throughout the day.
Positive praise for the smallest achievements.
Creating a nurturing environment where the children feel safe and happy.

Sensory and/or Physical Needs

We have levelled provision which is inclusive and accessible for all.
Quiet spaces available.
Sensory toys available.
Creating a nurturing environment where the children feel safe and happy.

Explicit Teaching of Vocabulary

The development of children's spoken language underpins all seven areas of learning and development. Children's back-and-forth interactions from an early age form the foundations for language and cognitive development. The quantity and quality of the conversations they have with adults and peers throughout the day in a language-rich environment is crucial. By commenting on what children are interested in or doing, and echoing back what they say with new vocabulary added, practitioners will build children's language effectively. Reading frequently to children, and engaging them actively in stories, non-fiction, rhymes and poems, and then providing them with extensive opportunities to use and embed new words in a range of contexts, will give children the opportunity to thrive. Through conversation, storytelling and role play, where children share their ideas with support and modelling from their teacher, and sensitive questioning that invites them to elaborate, children become comfortable using a rich range of vocabulary and language structures.

We include tier 2 vocabulary in our curriculum to link alongside the texts we cover to ensure that all children are exposed to a more varied vocabulary. This vocabulary is introduced and taught explicitly.

We know that oracy is a life skill and pivotal in improving educational outcomes, economic viability, literacy, and emotional skills as well as developing personal development (well-being, self-esteem, confidence, citizenship). The ability to communicate effectively is a fundamental ingredient to success in both early years and beyond.

<u>Nursery</u>	<u>Reception</u>
• amount, • backwards, • collection, • count, • few, • fewer (than), • forwards, • how many, • largest, • lot(s), • more (than), • number, • numeral, • same, • smallest, • subitise	• after, • before, • different, • represent, • zero

N.B. – Vocabulary is listed only at the point of introduction. In subsequent year groups, pupils are expected to recall and apply previously taught vocabulary as part of their ongoing learning.

Oracy

The need for high-quality oracy provision in the Early Years Foundation Stage is more important than ever. An explicit and deliberate focus on developing children's oracy skills, including teaching and modelling language, vocabulary, and social communication skills and creating thoughtful opportunities for collaborative talk can set children up for success through the rest of their schooling.

Oracy in maths involves:

- **Talking about numbers, shapes, patterns, and measures.**
- **Explaining thinking:** “I counted five blocks because...”
- **Reasoning and problem-solving verbally:** “If I add one more, how many will there be?”
- **Using mathematical vocabulary accurately:** more/less, heavier/lighter, above/below, full/empty.

It's not just about answering questions—it's about **thinking out loud, exploring ideas, and communicating reasoning.**

Make every conversation count

Oracy EYFS Outcomes

Early Learning Goals

- **Communication and Language: Listening and Attention-** Children listen attentively in a range of situations. They listen to stories, accurately anticipating key events and respond to what they hear with relevant comments, questions or actions. They give their attention to what others say and respond appropriately, while engaged in another activity.
- **Communication and Language: Understanding-** Children follow instructions involving several ideas or actions. They answer ‘how’ and ‘why’ questions about their experiences and in response to stories or events.
- **Communication and Language: Speaking-** Children express themselves effectively, showing awareness of listeners’ needs. They use past, present and future forms accurately when talking about events that have happened or are to happen in the future. They develop their own narratives and explanations by connecting ideas or events.

Oracy Progression

Progression of skills – EYFS	
Physical • I can speak clearly and be understood • I can speak clear and be heard • I can look at who is talking and who I am talking to • I can use gestures to support meaning in play	Linguistic • I can use talk in play to practice new vocabulary • I can join phrases with words such as ‘if’, ‘because’ ‘so’ ‘could’ ‘but’
Cognitive • I can use talk in play to practice new vocabulary	Social and Emotional • I can look at someone who is speaking to them

- I can join phrases with words such as 'if', 'because' 'so' 'could' 'but'

- I can take turns to speak when working in a group

Teaching Ideas

- Provide pupils with opportunities to take on different roles, ensuring they are equipped with the appropriate knowledge and vocabulary to do this successfully.
- E.g. A shopkeeper, doctor, vet through continuous provision area
- Support pupils' understanding of turn-taking in talk by using a physical object such as a toy to signify whose turn it is to speak.
- Support pupils' understanding of listening through partner conversations. Break down what it means to listen and frequently return to this through praise. E.g. 'Perfect partners sit calmly and face each other when they are listening'.
- Introduce new language and sentence stems through call and repeat, 'my turn, your turn'.
- Support pupils to develop an awareness of the volume of their voice through modelling and chances for them to practice speaking at different levels. E.g. 'tell your partner what you had for breakfast in a whisper ... now tell me your favourite colour in a playground voice!'
- Build pupils' confidence to speak in class by getting them talking about silly subjects, e.g. would you rather be a chicken or a cow?

Experiences

- To speak to a partner during whole class teaching
- Provide pupils with opportunities to speak for an extended period about something they are interested in, for example a favourite toy or what they did at the weekend
- Ask a question to a visitor in school

ShREC Approach

Sh: Share attention

This involves being at the child's level, paying close attention to what they are focused on and being present in the moment together.

In doing this, you show the child that you have a genuine interest in what they are doing, and it is a great way to build a relationship with them. Being on their level allows you to focus clearly on what they look at, do and say, whilst also allowing the most organic situation for conversation to take place.

R: Respond

This includes following the child's lead and also responding to their non-verbal and verbal communication. You could comment on what they can see, hear or feel, modelling language or new vocabulary. It could also involve you narrating their activity or making links between the current situation and a previous one.

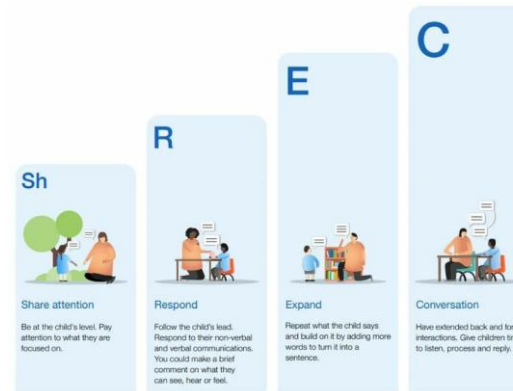
E: Expand

This might include repeating what the child says and building on it by adding more words to turn it into a sentence, being aware that you are following the pupil's lead and not forcing them to repeat you.

Additional guidance from the EEF details how educators can support progress by pitching their responses just above where the pupil is currently working, for example, 'if a child gives a one-word response such as 'dog', the adult should expand on what they say by repeating and building on this utterance by adding a few more words: 'Yes, it's a dog. A big/small/friendly/brown dog!'.

C: Conversation

This includes having extended back-and-forth interactions where you give children time to listen, process and reply. Modelling and scaffolding conversation skills involve giving pupils ample opportunities to talk, receive feedback, ask questions, lead discussions and share ideas. The EEF encourages educators to use open questions to invite pupils to expand on their ideas.



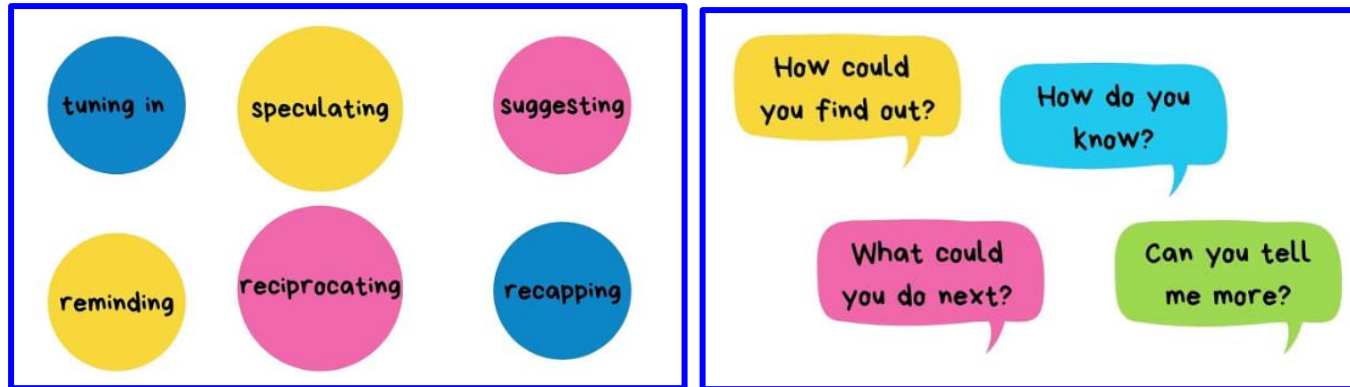
Sustained shared thinking

Sustained Shared Thinking helps children to develop their thinking skills as they are encouraged to be curious, think critically and problem solve. This positively impacts their overall learning and development as children engage in deeper thinking in all areas of learning. Sustained shared thinking is when two or more individuals 'work together' in an intellectual way. It can happen between a child and a practitioner or between two children.

There are many ways to support sustained shared thinking in settings and these can include an adult:

- showing genuine interest
- respecting children's own decisions and choices and inviting them to elaborate
- using encouragement to further thinking
- offering an alternative viewpoint

It can be useful to use questioning to help encourage children's reflection and extend their thinking. Questions could include:



EYFS Communication Champions

Here we have our EYFS champions.

These children have been selected to be Communication Champions because:

- *They model good use of language to their peers.
- *They help their peers to communicate their needs.
- *They model good turn-taking.
- *They model good listening.

Throughout this year, the champions will work with Miss Morris to support our development of communication across EYFS.

Curriculum Content – Nursery

White Rose Maths Yearly Overview – Nursery

Comparison 1	Shape, space and measure 1	Pattern 1	Counting 1	Counting 2	Subitising 1
More than, fewer than, same	Explore and build with shapes and objects	Explore repeats	Hear and say number names	Begin to order number names	I see 1, 2, 3
Pattern 2	Shape, space and measure 2	Subitising 2	Counting 3	Shape, space and measure 3	Pattern 3
Join in with repeats	Explore position and space	Show me 1, 2, 3	Move and label 1, 2, 3	Explore position and routes	Explore patterns
Counting 4	Shape, space and measure 4	Subitising 3	Comparison 2	Pattern 4	Shape, space and measure 5
Take and give 1, 2, 3	Match, talk, push and pull	Talk about dots	Compare and sort collections	Lead on own repeats	Start to puzzle
Pattern 5	Subitising 4	Counting 5	Pattern 6	Counting 6	Comparison 3
Making patterns together	Make games and actions	Show me 5	My own pattern	Stop at 1, 2, 3, 4, 5	Match, sort, compare

Characteristics of Effective Teaching and Learning

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Playing and exploring: - Children investigate and experience things, and ‘have a go’. Children who actively participate in their own play develop a larger store of information and experiences to draw on which positively supports their learning Active learning: - Children concentrate and keep on trying if they encounter difficulties. They are proud of their own achievements. For children to develop into self-regulating, lifelong learners they are required to take ownership, accept challenges and learn persistence. Creating and thinking critically: - Children develop their own ideas and make links between these ideas. They think flexibly and rationally, drawing on previous experiences which help them to solve problems and reach conclusions. Unique Child: Every child is unique and has the potential to be resilient, capable, confident and self-assured. Positive Relationships: Children flourish with warm, strong & positive partnerships between all staff and parents/carers. This promotes independence across the EYFS curriculum. Children and practitioners are NOT alone – embrace each community. Enabling environments: Children learn and develop well in safe and secure environments where routines are established and where adults respond to their individual needs and passions and help them to build upon their learning over time. Learning and Development: Children develop and learn at different rates. We must be aware of children who need greater support than others.					

Communication and Language

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
3&4-year olds: 	- Understand a question or instruction that has two parts, such as: “Get your coat and wait at the door”. - Sing a large repertoire of songs. - Use talk to organise themselves and their play: “Let’s go on a bus... you sit there... I’ll be the driver.” - Pay attention to more than one thing at a time, which can be difficult - Develop their communication but may continue to have problems with irregular tenses and plurals, such as ‘runned’ for ‘ran’, ‘swimmed’ for ‘swam’. - Use longer sentences of four to six words. - Start a conversation with an adult or a friend and continue it for many turns - Enjoy listening to longer stories and can remember much of what happens. - Know many rhymes, be able to talk about familiar books, and be able to tell a long story					

	• Use a wider range of vocabulary • Develop their pronunciation but may have problems saying: • some sounds: r, j, th, ch, and sh • multi-syllabic words such as 'pterodactyl', 'planetarium' or 'hippopotamus' • Understand 'why' questions, like: "Why do you think the caterpillar got so fat?" • Be able to express a point of view and to debate when they disagree with an adult or a friend, using words as well as actions
Reception ELG:	<u>Listening, Attention and Understanding</u> *Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during *Make comments about what they have heard and ask questions to clarify their understanding. *Hold conversation when engaged in back-and-forth exchanges with their teacher and peers. <u>Speaking</u> *Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary. *Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate. *Express their ideas and feelings about their experiences using full sentences, including use of past, present and future tenses and making use of conjunctions.

Mathematics

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
3&4-year olds: 	Compare quantities using language: 'more than', 'fewer than'. Talk about and explore 2D and 3D shapes. Notice patterns and arrange things in patterns. Recite numbers past 5.	Recite numbers past 5. Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). Notice patterns and arrange things in patterns. Compare sizes, weights etc. using gesture and language – 'bigger/little/smaller', 'high/low', 'tall', 'heavy'. Make comparisons between objects relating to size, length, weight and capacity.	Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). Show 'finger numbers' up to 5. Say one number for each item in order: 1, 2, 3, 4, 5. Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Climb and squeeze themselves into different types of spaces. Complete inset puzzles.	Say one number for each item in order: 1, 2, 3, 4, 5. Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc. Combine shapes to make new ones – an arch, a bigger triangle, etc. Describe a familiar route. Develop fast recognition of up to 3 objects,	Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs', etc. Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides',	Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). Show 'finger numbers' up to 5. Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Extend and create ABAB patterns – stick, leaf, stick, leaf.

		Understand position through words alone – for example, “The bag is under the table,” – with no pointing.	Discuss routes and locations, using words like ‘in front of’ and ‘behind’. Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like ‘pointy’, ‘spotty’, ‘blobs’, etc.	without having to count them individually (‘subitising’). Show ‘finger numbers’ up to 5. Compare quantities using language: ‘more than’, ‘fewer than’.	‘corners’, ‘straight’, ‘flat’, ‘round’. Discuss routes and locations, using words like ‘in front of’ and ‘behind’. Extend and create ABAB patterns – stick, leaf, stick, leaf. Develop fast recognition of up to 3 objects, without having to count them individually (‘subitising’). Show ‘finger numbers’ up to 5.	Notice and correct an error in a repeating pattern. Begin to describe a sequence of events, real or fictional, using words such as ‘first’, ‘then...’ Know that the last number reached when counting a small set of objects tells you how many there are in total (‘cardinal principle’). Show ‘finger numbers’ up to 5. Experiment with their own symbols and marks as well as numerals. Compare quantities using language: ‘more than’, ‘fewer than’. Solve real world mathematical problems with numbers up to 5.
Reception ELG:	Number: *Have a deep understanding of number to 10, including the composition of each number. *Subitise (recognise quantities without counting) up to 5. *Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. Numerical Patterns: *Verbally count beyond 20, recognising the pattern of the counting system. *Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. *Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.					

White Rose Maths

AUTUMN	SPRING	SUMMER
Comparison 1 - More than, fewer than, same Shape, space and measure 1 - Explore and build with shapes and objects Pattern 1 - Explore repeats Counting 1 - Hear and say number names Counting 2 - Begin to order number names Subitising 1 - I see 1,2,3 Pattern 2 - Join in with repeats Shape, space and measure 2 - Explore position and space	Subitising 2 – Show me 1,2,3 Counting 3 – Move and label 1,2,3 Shape, space and measure 3 – Explore position and routes Pattern 3 – Explore own first patterns Counting 4 – Take and give 1,2,3 Shape, space and measure 4 – Match, talk, push and pull Subitising 3 – Talk about dots Comparison 2 – Compare and sort collections	Pattern 4 – Lead on own repeats Shape, space and measure 5 – Start to puzzle Pattern 5 – Making patterns together Subitising 4 – Make games and actions Counting 5 – Show me 5 Pattern 6 – My own pattern Counting 6 – Stop at 1,2,3,4,5 Comparison 3 – Match, sort, compare

Curriculum Content – Reception

White Rose Maths Yearly Overview – Reception

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Getting to know you		Match, sort and compare FREE TRIAL Free trial VIEW	Talk about measure and patterns VIEW	It's me 1, 2, 3 VIEW				Circles and triangles VIEW	1, 2, 3, 4, 5 VIEW		Shapes with 4 sides VIEW
Spring	Alive in 5 VIEW	Mass and capacity VIEW	Growing 6, 7, 8 VIEW	Length, height and time VIEW			Building 9 and 10 VIEW			Explore 3-D shapes VIEW		
Summer	To 20 and beyond VIEW	How many now? VIEW	Manipulate, compose and decompose VIEW	Sharing and grouping VIEW			Visualise, build and map VIEW		Make connections VIEW		Consolidation VIEW	

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Communication and Language

Communication and Language	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
National Curriculum Links: English	The development of children's spoken language underpins all seven areas of learning and development. Children's back-and-forth interactions from an early age form the foundations for language and cognitive development. The number and quality of the conversations they have with adults and peers throughout the day in a language-rich environment is crucial. By commenting on what children are interested in or doing, and echoing back what they say with new vocabulary added , practitioners will build children's language effectively. Reading frequently to children , and engaging them actively in stories , non-fiction, rhymes and poems, and then providing them with extensive opportunities to use and embed new words in a range of contexts , will give children the opportunity to thrive. Through conversation, story-telling and role play , where children share their ideas with support and modelling from their teacher, and sensitive questioning that invites them to elaborate, children become comfortable using a rich range of vocabulary and language structures .					
Prior Learning 3-4 year olds	- Understand a question or instruction that has two parts, such as: "Get your coat and wait at the door". - Sing a large repertoire of songs. - Use talk to organise themselves and their play: "Let's go on a bus... you sit there... I'll be the driver." - Pay attention to more than one thing at a time, which can be difficult - Develop their communication but may continue to have problems with irregular tenses and plurals, such as 'runned' for 'ran', 'swimmed' for 'swam'. - Use longer sentences of four to six words. - Start a conversation with an adult or a friend and continue it for many turns - Enjoy listening to longer stories and can remember much of what happens. - Know many rhymes, be able to talk about familiar books, and be able to tell a long story - Use a wider range of vocabulary - Develop their pronunciation but may have problems saying: • some sounds: r, j, th, ch, and sh • multi-syllabic words such as 'pterodactyl', 'planetarium' or 'hippopotamus' - Understand 'why' questions, like: "Why do you think the caterpillar got so fat?" Be able to express a point of view and to debate when they disagree with an adult or a friend, using words as well as actions					
Strands: Listening, Attention and Understanding	Engage in story times. Listen carefully to rhymes and songs,	Listen to and talk about stories to build familiarity and understanding.	Develop social phrases. Use new vocabulary in different contexts.	Retell the story, once they have developed a deep familiarity with the text; some as exact repetition	ELG: Listening, Attention and Understanding	

Speaking 	paying attention to how they sound. Understand how to listen carefully and why listening is important. Learn new vocabulary.	Learn rhymes, poems and songs. Use new vocabulary through the day.	Ask questions to find out more and to check they understand what has been said to them. Articulate their ideas and thoughts in well-formed sentences Describe events in some detail. Use talk to help work out problems and organise thinking and activities explain how things work and why they might happen.	and some in their own words. Engage in non-fiction books. Listen to and talk about selected non-fiction to develop a deep familiarity with new knowledge and vocabulary. Connect one idea or action to another using a range of connectives.	*Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during *Make comments about what they have heard and ask questions to clarify their understanding. *Hold conversation when engaged in back-and-forth exchanges with their teacher and peers. Speaking *Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary. *Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate. *Express their ideas and feelings about their experiences using full sentences, including use of past, present and future tenses and making use of conjunctions, with
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Mathematics

Maths	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
National Curriculum Links: Maths	Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently , develop a deep understanding of the numbers to 10 , the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives , including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics , look for patterns and relationships , spot connections , 'have a go' , talk to adults and peers about what they notice and not be afraid to make mistakes.					
Prior Learning 3-4 year olds	Compare quantities using language: 'more than', 'fewer than'. Talk about and explore 2D and 3D shapes. Notice patterns and arrange things in patterns. Recite numbers past 5.	Recite numbers past 5. Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). Notice patterns and arrange things in patterns. Compare sizes, weights etc. using gesture and language – 'bigger/little/smaller', 'high/low', 'tall', 'heavy'. Make comparisons between objects relating to size, length, weight and capacity. Understand position through words alone – for example, "The bag is under the table," – with no pointing.	Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). Show 'finger numbers' up to 5. Say one number for each item in order: 1, 2, 3, 4, 5. Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Climb and squeeze themselves into different types of spaces. Complete inset puzzles. Discuss routes and locations, using words like 'in front of' and 'behind'. Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like	Say one number for each item in order: 1, 2, 3, 4, 5. Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc. Combine shapes to make new ones – an arch, a bigger triangle, etc. Describe a familiar route. Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). Show 'finger numbers' up to 5.	Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs', etc. Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. Discuss routes and locations, using words like 'in front of' and 'behind'.	Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). Show 'finger numbers' up to 5. Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Extend and create ABAB patterns – stick, leaf, stick, leaf. Notice and correct an error in a repeating pattern. Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...' Know that the last number reached when

			‘pointy’, ‘spotty’, ‘blobs’, etc.	Compare quantities using language: ‘more than’, ‘fewer than’.	Extend and create ABAB patterns – stick, leaf, stick, leaf. Develop fast recognition of up to 3 objects, without having to count them individually (‘subitising’). Show ‘finger numbers’ up to 5. counting a small set of objects tells you how many there are in total (‘cardinal principle’). Show ‘finger numbers’ up to 5. Experiment with their own symbols and marks as well as numerals. Compare quantities using language: ‘more than’, ‘fewer than’. Solve real world mathematical problems with numbers up to 5.
Strands: Mathematics Numerical Patterns Spatial Reasoning   	Continue, copy and create repeating patterns. Count objects, actions and sounds.	Subitise. Link the number symbol (numeral) with its cardinal number value. Compare length, weight and capacity	Select, rotate and manipulate shapes in order to develop spatial reasoning skills. Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can. Automatically recall number bonds for numbers 0–10.	Count beyond ten Compare numbers Understand the ‘one more than/one less than’ relationship between consecutive numbers Explore the composition of numbers to 10.	ELG: Number: Have a deep understanding of number to 10, including the composition of each number. Subitise (recognise quantities without counting) up to 5. Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. Numerical Patterns: Verbally count beyond 20, recognising the pattern of the counting system. Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

Combined NCETM and White Rose Maths - Reception

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
White Rose Maths Focus Areas/Units	Match, sort, compare. Talk about measure and patterns.	It's Me 1, 2, 3. Circles and Triangles. 1, 2, 3, 4, 5. Shapes with 4 sides.	Alive in 5. Mass and capacity. Growing 6, 7, 8. Length, height and time.	Length, height and time. Building 9 and 10. Explore 3D shapes.	To 20 and beyond. How many now? Manipulate, compose and decompose. Sharing and grouping.	Consolidation term Sharing and grouping. Visualise, build and map. Make connections.
NCETM and White Rose Maths combined	Counting, Comparison, Cardinality, and Shape - Enjoy reciting numbers forwards and backwards. - Explore counting objects/actions. - Subitise small quantities. - Compare groups (more/less/same). - Match objects, pictures and sets. - Sort sets / objects. - Notice patterns in counting and explore size, mass and capacity informally. - Explore, copy and continue simple patterns. - Use informal language and analogies, (e.g. heart shaped and hand-shaped	Composition, Counting, Cardinality, Shapes and Positional Language - Represent, compare and explore the composition of numbers (to 5). - Show an awareness that numbers are made up of smaller numbers and explore partitioning in different ways. - Count up to 10 objects. - Put numerals in order. - Learn shape names (2D, 4 sided shapes). Combine shapes with 4 sides. Shapes in the environment. - Describe position.	Comparison, Cardinality, Composition, Spatial Awareness, Shape, Measures - Introduce zero. - Extend numbers within 10. - 1 more and 1 less - Explore number bonds. - Combine two groups - Doubles - Odd and even - Match the numeral to a group of items. - Subitise larger numbers by subitising smaller groups within a number - Begin to measure length / height, mass/capacity. - Becomes familiar with measuring tools in everyday	Composition, Spatial Awareness, Pattern, Measures, Shapes - Explore numbers to 10. - Deep understanding of numbers to 10. - Recall number bonds. - Understand odd/even - Sharing and grouping. - Use spatial reasoning and positioning language. - Investigate turning and flipping objects in order to make shapes fit. - Make simple maps of familiar and imaginative environments.	Numbers beyond 10, pattern, shape and measure application - Compare quantities up to 10 in different contexts. - Build numbers beyond 10. -- Automatically recall number bonds up to 5 (including subtraction facts) and some number bonds to 10 including doubling facts. Recognise patterns (including those beyond 20). - Further explore 3D shapes, spatial reasoning. - Apply measure / shape / space in meaningful contexts.	Consolidation - Revisit and deepen understanding of number, shape, space and measure. - Take away. - Doubling. - Sharing and grouping. - Even/odd recognition. - Create and explore own patterns. - Visualise from different positions. Describe positions. Give instructions to build. - Continue to secure objectives taken from the ELGs and from shape, space and measure guidance.

	leaves), as well as mathematical terms to describe shapes.	- Explore one more/one less.	experiences and play. - Begin to understand and sequence time (day/night etc.) - Use spatial language, including following and giving directions and describe what they see from different viewpoints. - Enjoy composing and decomposing shapes. - Use own ideas to make models of increasing complexity, selecting blocks needed, solving problems and visualising what they will build.	- Recognise and describe simple 3D shapes. - Spot patterns in the environment; begin to identify the pattern "rule". - Choose familiar objects to create and recreate repeating patterns beyond AB patterns and begin to identify the unit of repeat. - Verbally count beyond 20, recognising the pattern. - Order and sequence events using everyday language related to time.	- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.	Use assessment to plug gaps and secure fluency.
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Progression of Golden Threads: EYFS (Linked to National Curriculum Domains)

Thread	EYFS (Statutory Framework)
Number Sense & Place Value	Counting, comparing, ordering, subitising
Calculation Fluency	Combining sets, early addition/subtraction
Part–Whole Relationships	Composing/decomposing numbers
Representation & Structure (CPA)	Manipulatives, pictures, informal marks
Reasoning & Problem Solving	Compare, explain, justify in play
Language & Vocabulary	Informal comparison words
Connections & Coherence	Linking number, shape, pattern
Metacognition & Habits	Curiosity, confidence, pattern spotting

Example of Progressive Learning: Fractions & Proportional Reasoning – EYFS

Phase / Year	Key Knowledge & Concepts	Skills Developed	Representation & Models	Mathematical Language
EYFS	- Understands the idea of sharing and grouping through play. - Recognises when things are “the same” or “different” in size or quantity. - Uses early experiences with shape and pattern to explore “part” and “whole”.	- Shares objects fairly between two groups. - Begins to describe equal and unequal groups. - Notices halves in shapes or sets informally.	Concrete play: food, playdough, pattern blocks, sharing toys.	half, share, equal, same, fair

Example of Progressive Learning: Place Value & Number Sense - EYFS

Year / Phase	Knowledge & Conceptual Focus	Skill Development	Linked Golden Threads	Representation & Models	Mathematical Language
EYFS	Understands that numbers represent quantity; counts with one-to-one correspondence; compares sets.	Counts to 10, orders small numbers, subitises to 5.	Number Sense & Place Value Representation & Structure	Counters, tens frames, numicon, number tracks.	count, more, fewer, same, order, how many

Example of Progressive Learning: Multiplication, Division, Scaling & Area – EYFS

Year / Phase	Knowledge & Conceptual Focus	Skill Development	Linked Golden Threads	Representation & Models	Mathematical Language
EYFS	Repeats patterns, counts equal groups in play.	Begins skip counting; arranges equal groups.	Calculation Fluency Part-Whole	Grouping objects, arrays, pattern play.	group, same, altogether, equal

Autumn book list



These books are within the White Rose Maths Reception schemes of learning. They are not an exclusive list, but support the learning in each step.

Block 1 – Match, sort and compare

- *A Pair of Socks* by Stuart J. Murphy
- *Seaweed Soup* by Stuart J. Murphy
- *The Button Box* by Margarette S. Reid
- *Beep Beep, Vroom Vroom!* by Stuart J. Murphy

Block 2 – Talk about measure and pattern

- *Where's My Teddy?* by Jez Alborough
- *It's the Bear!* by Jez Alborough
- *The Blue Balloon* by Mick Inkpen
- *Dear Zoo* by Rod Campbell
- *My First Book of Patterns* by Bobby and June George
- *We're Going on a Bear Hunt* by Michael Rosen
- *A-B-A-B-A – A Book of Pattern Play* by Brian P. Cleary

Block 3 – It's me 1, 2, 3

- *Anno's Counting Book* by Mitsumasa Anno
- *How to Count to One* by Casper Salmon
- *Goldilocks and the Three Bears*
- *The Gingerbread Man*
- *A Squash and a Squeeze* by Julia Donaldson
- *The Three Billy Goats Gruff*

Block 4 – Circles and triangles

- *Circle, Triangle, Elephant! A Book of Shapes and Surprises* by Kenji Oikawa and Mayuko Takeuchi
- *Triangle* by Mac Barnett and Jon Klassen
- *Shapes, Shapes, Shapes* by Tana Hoban
- *We're Going on a Bear Hunt* by Michael Rosen
- *Rosie's Walk* by Pat Hutchins

Block 5 – 1, 2, 3, 4, 5

- *Witches Four* by Marc Brown
- *Five Little Fiends* by Sarah Dyer
- *Pete the Cat and his Four Groovy Buttons* by Eric Litwin
- *Kipper's Birthday* by Mick Inkpen
- *The Very Hungry Caterpillar* by Eric Carle
- *Stella to Earth!* by Simon Puttock and Philip Hopman
- *Anno's Counting Book* by Mitsumasa Anno

Block 6 – Shapes with 4 sides

- *Bear in a Square* by Stella Blackstone
- *Square* by Mac Barnett and Jon Klassen
- *Shapes, Shapes, Shapes* by Tana Hoban
- *Night Monkey, Day Monkey* by Julia Donaldson
- *The Fox in the Dark* by Alison Green

Spring book list



These books are within the White Rose Maths Reception schemes of learning. They are not an exclusive list, but support the learning in each step.

Block 1 – Alive in 5

- *Zero is the Leaves on the Tree* by Betsy Franco
- *None the Number* by Oliver Jeffers
- *Anno's Counting Book* by Mitsumasa Anno
- *I Spy Numbers* by Jean Marzollo
- *The Ugly Five* by Julia Donaldson
- *Five Small Stars* by Elizabeth Matterson and Madge Bugden
- *Room on the Broom* by Julia Donaldson

Block 2 – Mass and capacity

- *Who Sank the Boat?* by Pamela Allen
- *Balancing Act* by Ellen Stoll Walsh
- *A Beach for Albert* by Eleanor May

Block 3 – Growing 6, 7, 8

- *Handa's Surprise* by Eileen Browne
- *Sidney the Silly Who Only Eats 6* by M.W. Penn
- *Six Dinner Sid* by Inga Moore
- *1, 2, 3 to the Zoo* by Eric Carle
- *Kipper's Toybox* by Mick Inkpen
- *Quack and Count* by Keith Baker
- *Simon Sock* by Sue Hendra and Paul Linnet

- *Missing Mittens* by Stuart J. Murphy
- *Noah's Ark*
- *Double Dave* by Sue Hendra
- *Minnie's Diner* by Dayle Ann Dodds
- *Two of Everything* by Lily Toy Hong
- *Don't Forget the Bacon!* by Pat Hutchins
- *The Snail and the Whale* by Julia Donaldson

Block 4 – Length, height and time

- *Superworm* by Julia Donaldson
- *Actual Size* by Steve Jenkins
- *Jim and the Beanstalk* by Raymond Briggs
- *I Can Only Draw Worms* by Will Mabbitt
- *Titch* by Pat Hutchins
- *Tall* by Jez Alborough
- *Jack and the Beanstalk*
- *The Giraffe Who Got in a Knot* by Paul Geraghty and John Bush
- *Five Minutes' Peace* by Jill Murphy
- *Mr Wolf's Week* by Colin Hawkins
- *A Dark, Dark Tale* by Ruth Brown
- *Jasper's Beanstalk* by Nick Butterworth

Retrieval Practice in the EYFS

Cognitive overload can be a barrier to learning and can subsequently halt a child from achieving their potential. In the [EYFS](#), this is even more fundamental because if children cannot retain the building blocks for future learning, they may struggle throughout their schooling.

Learning must be broken down into manageable steps. This means children process just a few 'chunks' and then build on this in the next lesson.

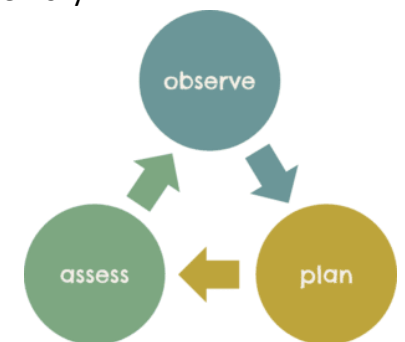
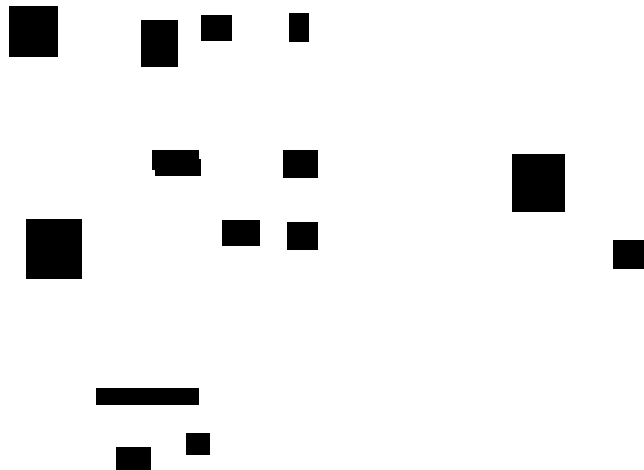
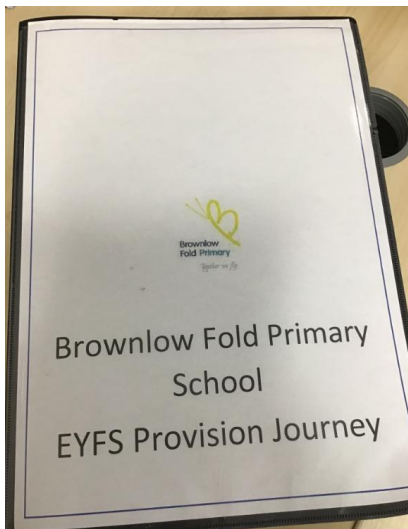
Reviewing, revisiting and **reactivating** prior learning is a powerful tool to build fluency. The method of frequent reviews allows children to build on what they know, especially when new concepts are introduced.

Teachers provide simple but clear models of the skills and content they are teaching enabling better outcomes. Using the power of talk to show simple thought processes and things that could go wrong will support speech. Scaffolding for more complex tasks will also help children.

Staff can use questioning in many ways. They can clarify a child's understanding or understanding of the child's learning process, rather than just seeking an answer.

Independent practice is essential to give learners time to process and practice tasks using the new concept and make sure children are not making too many mistakes. Learners need this time to rehearse. Rehearsal enables knowledge to become automated and a part of long term memory.

The cycle of planning, observing and assessing is key as part of retrieval practice.



Our Learning Journey is added to a classroom display each week, at the end of each half term this is moved into a floor book. The floor book is kept in the classroom for the children to freely look back on. This allows for natural reflective times within our provision. Adults are able to effectively question the children during these times as part of our retrieval practice.

End Point Progression in Maths

EYFS Maths End Points What will the children be able to know and do?

Nursery

Develop fast recognition of up to 3 objects, without having to count them individually (subitising).

- Recite numbers past 5.
- Say one number for each item in order: 1,2,3,4,5
- Know that the last number reached when counting a small set of objects tells you how many there are in total (cardinal principle).
- Show 'finger numbers' up to 5.
- Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5.
- Experiment with their own symbols and marks as well as numerals.
- Solve real world mathematical problems with numbers up to 5.
- Compare quantities using language: 'more than', 'fewer than'.
- Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides' 'corners' 'straight' 'flat' 'round'
 - Understand position through words alone- for example, "The bag is under the table" with no pointing.
- Describe a familiar route.
- Discuss routes and locations, using words like 'in front of' and 'behind'.
- Make comparisons between objects relating to size, length, weight and capacity.
- Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc.
- Combine shapes to make new ones- an arch, a bigger triangle etc.
 - Talk about and identifies the patterns around them. For example, stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy' 'spotty' 'blobs' etc.
- Extend and create ABAB patterns- stick, leaf, stick, leaf.
- Notice and create an error in a repeating pattern.
- Begin to describe a sequence of events, real or fictional, using words such as 'first' 'then'.

Reception

ELG:

Number:

Have a deep understanding of number to 10, including the composition of each number.

Subitise (recognise quantities without counting) up to 5.

Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

Numerical Patterns:

Verbally count beyond 20, recognising the pattern of the counting system.

Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.

Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

EYFS Learning Environments

Reception Classroom



Nursery Classroom



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